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Docket No. GJE-13XC1D1C1
Serial No. 09/767,355Remarks

Claims 1-5 were initially pending in the subject application. By way of the amendment of this date, claims 1 and 3 have been amended, claims 4-5 have been canceled, and claims 6-22 have been added. Therefore, claims 1-3 and 6-22 are now before the Examiner for consideration. The subject invention provides unique and advantageous animal feeds that increase the feed efficiency of animals and methods for increasing the feed efficiency of animals comprising the administration of the animal feeds of the instant invention. Certain of the claims have been amended for the purpose of expediting the patent application process in a manner consistent with the Patent and Trademark Office Patent Business Goals (P.B.G.), 65 Fed. Reg. 54603 (September 8, 2000), in order to lend greater clarity to the claimed subject matter, advance prosecution, and facilitate the business interests of Applicant. Support for these new claims and the amendments to the pending claims can be found throughout the subject specification, including, for example, page 4, line 24 through page 5, line 12. Favorable consideration of the claims now presented, in view of the remarks and amendments set forth herein, is earnestly solicited.

Claims 1-3 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action has indicated that the terms "increase" and "performance-increasing" are not defined by the claim, that the specification does not provide a standard for ascertaining the requisite degree, and that one skilled in the art would not be reasonably apprised of the scope of the invention. While it is believed that this rejection is moot, the following remarks are provided in the event that the application of this rejection to the phrases "increases the feed efficiency" or "increasing the feed efficiency" is considered.

The fact that claim language, including terms of degree, may not be precise does not automatically render the claim indefinite under 35 U.S.C. § 112, second paragraph. *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 U.S.P.Q. 568 (Fed. Cir. 1984). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification. When a term of degree is presented in a

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claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention.

In the case of the instantly claimed invention, it is respectfully submitted that one skilled in the art would recognize that which constitutes an increase in the feed efficiency of an animal and that the specification provides a means for ascertaining increases in the feed efficiency of animals. Particularly, those skilled in the relevant art routinely calculate the "feed efficiency" of animals and are familiar with the parameters that are associated with "feed efficiency". Furthermore, as pointed out in the specification, improvements in feed efficiency can be determined by comparison of feed utilization (intake) compared to the weight gain between groups of animals (e.g., controls versus test animals).

Claims 1 and 3-4 have been rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over, Lewandowski *et al.* (U.S. Patent No. 5,811,289). It is respectfully submitted that the reference fails to anticipate, or render obvious, the subject invention.

It is well settled law that anticipation requires that the reference shows the identical invention, in as complete detail, as is provided by the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Lewandowski teaches the manipulation of liquid dairy industry effluent for the preparation of a liquid biomass, that may be stored for years as a sludge (see column 12, lines 1-3), that may be fed to bovids. Applicants respectfully submit that the reference: a) fails to teach methods of increasing the feed efficiency of animals, b) fails to teach the administration of essentially dry solid feeds to animals, c) fails to teach the addition of an amount of an organism selected from the group consisting of *Lactobacillus buchneri*, *Lactobacillus kefir*, *Lactobacillus parakefir*, and *Lactobacillus parabuchneri* that increases the feed efficiency of said animals, and d) is directed to the preparation of liquid feedstuffs for bovids and/or pigs. Accordingly, reconsideration and withdrawal of this aspect of the rejection is respectfully requested.

Turning to the issue of obviousness, it is well settled law that all the claim limitations must be taught or suggested by the prior art in order to establish a case of *prima facie* obviousness for a claimed invention. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Applicants respectfully submit that the reference fails to meet this requirement. As noted *supra*, the reference: a) fails to teach methods of increasing the feed efficiency of animals, b) fails to teach the administration of essentially dry solid feeds to animals, c) fails to teach the addition of an amount of an organism selected from the group consisting of *Lactobacillus buchneri*, *Lactobacillus kefir*, *Lactobacillus parakefir*, and *Lactobacillus parabuchneri* that increases the feed efficiency of said animals, and d) does not teach or suggest the addition of organisms, in amounts that increase feed efficiency, to essentially dry solid animal feeds.

Lewandowski *et al.* teach the treatment of milk industry waste products and the production of a biomass of good nutritional value suitable for animal feed (see Abstract). The reference indicates that a key feature of the invention is the removal of lactose to improve the functioning of classical treatment plants (column 2, lines 23-30). Additionally, it is clear that the invention of Lewandowski is directed to the biological manipulation of industrial waste into a useable product via fermentation. Lewandowski *et al.* also describes a two-step process for the production of the biomass that uses bacterial cells and yeasts (a mixed culture of about 15 bacteria and 12 yeast (see Example 1, lines 29-41)).

In contrast, the instant invention adds an amount of an organism selected from the group consisting of *Lactobacillus buchneri*, *Lactobacillus kefir*, *Lactobacillus parakefir*, and *Lactobacillus parabuchneri*, that increases the feed efficiency of said animals to existing essentially dry solid animal feedstuffs. Whereas the process of Lewandowski *et al.* is a fermentation of dairy waste effluents, the instant invention is not a fermentation of the animal feeds, and the organisms only become active in the rumen of the animal. In the subject invention, the organisms change the volatile fatty acid profile in the rumen of the animal, not the carbohydrate or biomass content of a potential feed (the teachings of Lewandowski *et al.*). Thus, it is respectfully submitted that the instant invention is not obvious over Lewandowski *et al.* for the foregoing reasons and the reconsideration and withdrawal of this aspect of the rejection is requested.

Claims 1-5 have been rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over, Bodenrader (U.S. Patent No. 4,264,448). It is respectfully submitted that the reference fails to anticipate, or render obvious, the invention of the subject invention.

Bodenrader teaches the treatment of liquid manure via the addition of lactic acid bacteria and a carbohydrate source (column 1, line 60 through column 3, line 10). Like Lewandowski *et al.*, Bodenrader teaches a fermentation process. The fermentation process increases the protein content of the manure via the production of *Lactobacillus* cell protein (see column 2, lines 1-2). While Bodenrader teaches that the fermented product can be used as an animal feed, the reference: a) fails to teach methods of increasing the feed efficiency of animals, b) fails to teach the administration of essentially dry solid feeds to animals, c) fails to teach the addition of an amount of an organism, selected from the group consisting of *Lactobacillus buchneri*, *Lactobacillus kefir*, *Lactobacillus parakefir*, and *Lactobacillus parabuchneri*, that increases the feed efficiency of said animals, and d) is directed to the preparation of liquid feedstuffs. As noted *supra*, anticipation requires that the reference teach each and every element recited within the claim. It is respectfully submitted that Bodenrader fails to teach the recited elements of the claim. Thus, reconsideration and withdrawal of the rejection is respectfully requested.

The Office Action has also indicated that the invention is obvious over Bodenrader. Applicants respectfully traverse. As noted *supra*, the reference: a) fails to teach methods of increasing the feed efficiency of animals, b) fails to teach the administration of essentially dry solid feeds to animals, c) fails to teach the addition of an amount of an organism, selected from the group consisting of *Lactobacillus buchneri*, *Lactobacillus kefir*, *Lactobacillus parakefir*, and *Lactobacillus parabuchneri*, that increases the feed efficiency of said animals, and d) is directed to the preparation of a fermented liquid manure, supplemented by the additional of other nutrients, as feedstuff for animals (see column 3, lines 49-51).

The instant invention does not rely upon the addition of *Lactobacilli* for the purposes set forth in Bodenrader and provides an essentially dry animal feed that increases the feed efficiency of animals to which the feed is provided. The instant invention is not a fermentation of the animal

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feeds; the organisms only become active in the rumen of the animal. Furthermore, Bodenrader's invention provides an enhanced liquid waste product that has had its protein content supplemented by Lactobacillus cell protein. In contrast to Bodenrader, the instant invention does not culture Lactobacilli to induce the proliferation of organisms in the animal feed and causes no pH change in the animal feed (compare to Bodenrader, for example, column 2, line 39 through column 4, line 13). Bodenrader's feed is a liquid, whereas that of the invention is an essentially dry solid feed. Thus, it is respectfully submitted that the instant invention is not obvious over Bodenrader, that the reference does not teach or suggest the claimed invention, and that the reference fails to establish a case of *prima facie* obviousness. For the foregoing reasons, reconsideration and withdrawal of this aspect of the rejection is requested.

In view of the foregoing remarks and amendments to the claims, Applicant believes that the currently pending claims are in condition for allowance, and such action is respectfully requested. The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

Applicant also invites the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachment: Marked-Up Version of Amended Claims

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Serial No. 09/767,355**MARKED-UP VERSION OF AMENDED CLAIMS****Claim 1. (Amended):**

A method for increasing the feed efficiency of animals ~~treating an animal selected from the~~
~~group consisting of pigs, poultry and ruminants, to increase the animal's performance, which~~
~~comprises comprising~~ administering to the ~~animals~~ animal, with its feed, a performance-increasing
an essentially dry solid feed comprising a feedstuff and an amount of an organism that increases the
feed efficiency of said animals, wherein said organism is selected from the group consisting of
Lactobacillus buchneri, *Lactobacillus kefir*, *Lactobacillus parakefir* and *Lactobacillus*
parabuchneri.

Claim 3. (Amended):

The method according to claim 1, wherein ~~the animal is cattle~~ said animals are selected from
the group consisting of pigs, poultry, and ruminants.